Volume 21 Contents

January

Editorials 1
Clinical Applications of Molecular Biology. A Chang and L Chan 3
Short Courses on DNA Detection and Amplification for Public Health in Central and South America: The Democratization of Molecular Biology. E Harris, M López, J Arévalo, J Bellatin, A Belli, J Morán and C Orrego 16
FEBS WEBS at the 21st Annual Meeting of FEBS, Trinity College, Dublin, 11 August, 1992. Report by M Lewis 22
Teaching Biochemistry as a "Writing Workshop" Course. R S Feldberg 26
Features Section
Computer Aided Learning. R P Learmonth 28
An Evaluation of a Computer-Aided Instruction Program on Laboratory Techniques and Calculations. J M Carrington 29
Problem-Based Learning. C A Smith 32
Data Handling Problems in Immunochemistry. M M Dawson and I Graham 33
Survey on Preparation for Graduate Studies in Molecular Biology in the United States. J K Zimmerman 36
An A-B-C of Protein Synthesis. B S Brown 37
The Licence in Experimental Biology at the Universidad Autónoma Metropolitana, Iztapalapa (México). E Mendieta and R Alva 39
Biotechnology Education 40
Experimental Section
A Simple Experiment to Teach Students the Use of Quality Control Programs in Analytical Biochemistry. L M Brown 41
Separation of Malt Amylasic Components by Hydrophobic Interaction Chromatography. L Franco-Fraguas and F Batista-Viera 43
Molecular Evolution: The Origin of Glycolysis. S Potter and L A Fothergill-Gilmore 45
Book Reviews 48
Lexicon 55
Monitor 56

April

Editorial 57
Protein Engineering. A Novel Way to Elucidate Structure–Function Relationships. A M Kayastha 59
The Australian Workshop on Biochemical Education 1992. Report on the Workshop held at the Melbourne Zoo on October 2nd to 4th 1992. Compiled by G Parslow 67
Formulae for Calculating the Energy Yield from the β-oxidation of Fatty Acids. I M Akunekwe 74
The Stereotyped Image of the Scientist Among Students of Different Countries: Evoking the Alchemist? L de Meis, R de Cássia P Machado, P Lustosa, V R Soares, M T Caldeira and L Fonseca 75
Elaboration of the Concept of Partition of Amphipathic Substrates in Bilayer Membranes in Courses on Enzymology. K P M Heirwegh and Z Zaman 81
Features Section
Computer Aided Learning. R P Learmonth 84
Distance Teaching of Information Technology in the Caribbean. A G Booth 86
22nd FEBS Meeting, July 4–9, 1993, Stockholm, Sweden. Symposium on Biochemical Education 88
Graphical Determination of 'True' Values of V_{max} and K_m. F Malatesta and P Ascenzi 88
Problem-Based Learning. C A Smith 89
Proteins—Calculations and Interpretative Questions. J M Walker 89
Some Problem Questions on Interactions Between Molecules of Biological Importance. E J Milner-White 92
Announcement 93
The International Union of Biochemistry and Molecular Biology Committee on Education. Activities Proposed for 1993 93
Doctoral Programs in Biochemistry in the Federal Republic of Germany. J G Wise and W E Trommer 94

Structures and Names for Inositol Phosphates and Phosphatidylinositols. G D'Andrea and M L Salucci 98
Women and the Biochemistry Curriculum. M L Uhr 101
Experimental Section
Lambda Phage DNA: Method for Rapid Preparation and Further Restriction Study. C Guimont 103
Development of a Practical Illustrating the Use of The Polymerase Chain Reaction for Genetic Testing. B Palmer and J Healy 106
A Laboratory Exercise Designed to Introduce Medical Students to Restriction Enzymes. J L Cox and J Mitchell 107
Book Reviews 109
Lexicon 115
Monitor 116

July

Editorial 117
Zinc Fingers Point the Way. E J Wood 118
Thinking Scientifically and the Organizational Culture of a Department of Biochemistry. E B M Falcão 127
Informal Biochemical Training in Brazil—the Estagiario System. J L de Lima Filho and W M Ledingham 131
Teaching Biochemistry for Undergraduate Students in Dentistry. A C C Spadaro 132
Evaluation of Japanese Universities by Their Contribution to Life Science. Y Kagawa 135
A Unique Undergraduate Degree Course in Biotechnology in South East Asia. S C L Lo, J C Tsang and F Kwok 137
Artificial Ribozymes. P Nahar and K K Singh 139
Evaluation of Science Policy in Spain. The Training of Human Resources (1960–1991) and the Development of Spanish Biochemistry and Molecular Biology. E Muñoz and V Larraga 141
Features Section
Problem-based Learning. C A Smith 143
Problem-based Learning of Biochemistry in a Medical Curriculum. C W Helleiner and L A V Fernandez 143
Computer Aided Learning. R P Learmonth 146
A Novel, Free Enzymology Teaching Program for Medical Students. A C da Silva, W M Ledingham, E H M Melo and J L de Lima Filho 147
Experimental Section
Recombinant DNA Techniques—A Laboratory Course. H S Hendrickson and J Giannini 149
Mechanism of the Translocation Step of Mediated Transport across Biomembranes: in Favour of the Allosteric Model. M O Eze 151
Inexpensive Large-scale Molecular Models for Use in Developing Countries. O Chude 153
Correcting Titration Curves of Weak Acids and Bases. C W Helleiner and P Briggs 154
Immunological Exercises for Beginners. S Tayyab, M Islam and S Qamar 155
Immobilization of Lactase on Silica Gel: Study of Lactose Hydrolysis Using The Immobilized Material. S Lartillot 157
Videotape Review 159
Book Reviews 160
Lexicon 167
Monitor 168

October

Editorial 169
The New Toronto Medical Curriculum. A Newman 170
Self-directed Study of Enzyme Catalysis using Computer and Print Resources. A G Dawson 180
The Concept of 'Added-Value' in Biochemistry Teaching. M Carroll 182
The Use of Open Learning Materials in Biochemical Education. E Lucassen 186
An Advance Organizer for the Teaching of Metabolism. B B Torres 188
The Teacher–Scholar Fellowship as a Model for Attracting New Faculty to Undergraduate Institutions. A M Campbell 190

Programs from the School of Medicine, National University of Mexico, to Enhance the Development of Biochemistry. E Piña 192
Science and Art: Concepts and Misconceptions. L de Meis, A Braga, V M Rumjanek and F Barral 195
Advanced Course on Structure-Function Relationships of Membrane Proteins: An Assessment of Current Knowledge. C Gutierrez-Merino 196
A Strategy for Introducing Lecturers to State-of-the-Art Concepts in Biochemistry. J Mas-Oliva, L de Meis and E Piña 197
The Energy Cost of Urea Synthesis. U Anand and C V Anand 198
Features Section
Problem-Based Learning. C A Smith 200
Problem-solving Questions in Examinations. K E Backen and C A Smith 200
Research Literature as a Source of Problems. H B White, III 205
Computer Aided Learning. R P Learmonth 208
3-D Contour Diagrams for Displaying Free Energy Changes of ATP Hydrolysis. M C Warburton and K L Manchester 208
Book/Software Review 210
Experimental Section
Determination of Mammalian Membrane Protein Anchorage: Glycosyl-phosphatidylinositol (G-PI) or Transmembrane Polypeptide Anchor. N M Hooper 212
An Investigative Undergraduate Laboratory Experiment Using Extraction, Chromatography, and a Biological Activity Test. P Seaton and J Zimmer 216
Enrichment Culture Technique Can Be Used to Introduce Variety into a Biochemical Laboratory Course. J L Howland and A Garfield 218
An Experiment on the Chemical Modification of Essential Histidine Residues of Lactate Dehydrogenase. I Díaz, I Nuñez de Castro and M A Medina 219
Letter to the Editor 220
Book Reviews 221
Lexicon 227
Volume Contents, Subject and Author Indexes to Volume 21, 1993 i